

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



U.G. DEGREE EXAMINATION – ALLIED

FIRST SEMESTER – APRIL 2023

CO 1104 – FUNDAMENTALS OF STATISTICS

Date: 08-05-2023

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

SECTION – A

ANSWER ALL QUESTIONS

(10 X 2= 20)

1. Define Statistics.
2. List out the different methods of sampling.
3. What are the various measures of measuring central tendency?
4. What do you mean by Pie Diagram?
5. Find the range for the following data: 10, 20,30,40,50.
6. Calculate Quartile deviation for the following data : 20, 28, 40, 12, 30, 15, 50.
7. State the properties of correlation coefficient.
8. State any two differences between correlation and regression.
9. What are the various measures of trend?
10. What is Time series Analysis?

SECTION – B

ANSWER ANY FOUR OF THE FOLLOWING

(4 X 10 = 40)

11. Enumerate the importance and scope of statistics.
12. Explain the various types of diagrammatic representation.
13. Illustrate the components of Time Series.
14. Find the standard deviation for the following data: 45, 36, 40, 37, 39, 42, 45, 35, 40, 39.
15. Calculate Pearson's measure of skewness for the following data.

Size	7	8	9	10	11	12	13	14
Frequency	2	11	36	64	39	39	22	2

16. Calculate the rank correlation coefficient for the rank of 10 students assigned by two teachers.

Students	1	2	3	4	5	6	7	8	9	10
Rank (Teacher 1)	8	7	6	3	2	1	4	9	10	5
Rank (Teacher 2)	10	8	5	2	1	3	6	9	7	4

17. Calculate three yearly moving average and short term fluctuations for the following years:

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Production ('000 tons)	21	22	23	25	24	22	25	26	27	26

SECTION – C

ANSWER ANY TWO QUESTIONS

(2 X 20 = 40)

18. Calculate Mean, Median and Mode for the following data:

Marks	0-10	10-20	20-30	30-40	40-50
No.of.Students	12	18	20	25	23

19. The scores of two players A and B in 12 rounds are given below:

A	74	75	78	72	78	77	79	81	79	76	72	71
B	87	84	80	88	89	85	86	82	82	79	86	80

Identify the better player and the more consistent player.

20. The following table gives the aptitude test scores and productivity indices of 10 workers selected at random:

Aptitude Scores (X)	60	62	65	70	72	48	53	73	65	82
Productivity Index (Y)	68	60	62	80	85	40	52	62	60	81

Calculate the two regression equations.

21. Calculate the seasonal indices from the following data using the average method.

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2015	72	68	80	70
2016	76	70	82	74
2017	74	66	84	80
2018	76	74	84	78
2019	78	74	86	82

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